# **BookletChart**<sup>TM</sup>



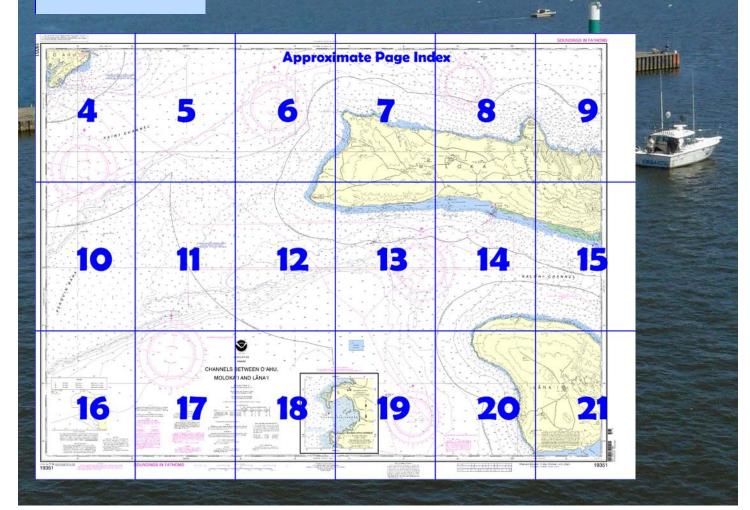
Channels between O'ahu, Moloka'i, and Lana'i

NOAA Chart 19351

A reduced-scale NOAA nautical chart for small boaters When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



# Published by the National Oceanic and Atmospheric Administration National Ocean Service Office of Coast Survey

<u>www.NauticalCharts.NOAA.gov</u> 888-990-NOAA

# What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

# What is a BookletChart<sup>™</sup>?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

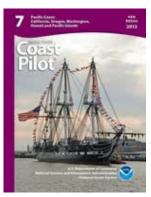
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <a href="http://www.NauticalCharts.NOAA.gov">http://www.NauticalCharts.NOAA.gov</a>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

# **Notice to Mariners Correction Status**

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <a href="http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=19351">http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=19351</a>.



(Selected Excerpts from Coast Pilot)
Kaumalapau Harbor, 3.5 miles N of
Palaoa Point, is the best harbor on Lanai
in all but W and kona weather. The
harbor is a small bight at the mouth of
the most prominent gulch in the vicinity.
A shoal area, marked by unlighted buoys
at the outer extremity, extends along
the S and E sides of the harbor. Many
local fishing craft moor to unlighted
mooring buoys in the harbor.
Kaumalapau Light (20°46'59"N.,
156°59'30"W.), 68 feet above the water,

is shown from a post with a black and white diamond-shaped dayboard on the S side of the harbor entrance. Oil tanks are prominent on the high ground back of the wharf. A private aerolight is about 2.3 miles E of the harbor.

A 250-foot breakwater with a distinctive white appearance is on the N side of the entrance, is about 50 yards WSW of the outer end of the breakwater. There is no entrance channel but a 600-foot opening leads to a turning basin which is 30 to 50 feet deep and about 500 feet by 800 feet. The wharf provides cargo sheds and about 400 feet of berthing space. The facilities also include two 35-ton and one 30-ton cranes, bulkhandling and storage for petroleum products. A barge makes weekly (Wednesday) calls on the harbor, at which time the harbor becomes a security zone. If a fuel barge is present, there is no admittance. Gasoline, diesel fuel, and water can be obtained on the Kaumalapau wharf. Small craft up to 40 feet can be handled by a derrick to the deck of the wharf, and small machine repairs can be made at a nearby shop. Nanahoa (Five Needles), about 2.3 miles N of Kaumalapau Harbor and near the middle of the W side of the island, are a group of detached pinnacle rocks. The outermost rock is about 300 yards offshore and 32 feet high, and the inner pinnacle is 120 feet high. The rocks are of the same material as the higher cliffs of the shore and are therefore not easily recognized from offshore. Good anchorage for small-craft can be had in the vicinity.

Keanapapa Point, 7.5 miles NW of Kaumalapau Harbor, is the westernmost point of Lanai. The point is low and rocky and is marked by a small knoll 150 yards inland from the shore. A small detached rock, 150 yards offshore, is 1.9 miles SE of Keanapapa Point. The cliffs, which are 200 feet high in the vicinity of this rock, gradually diminish in height until they are only 20 or 30 feet high 0.5 mile S of Keanapapa Point. Ka'ena Point, 1 mile N of Keanapapa Point, is low and rocky and is hard to distinguish from the other points in the vicinity. The low, rounding, unlighted, NW coast of Lanai is not easily seen at night, and vessels should give it a berth of at least 1 mile, although 0.5 mile will clear all dangers. There are many small, rocky points and short, sandy indentations in this vicinity, and boats can land in the lee of the points at times. About 1.5 miles ENE of Ka'ena Point is a 1-mile-long stretch of sand beach, with no fringing reef, that provides easy landing for small boats. E of this beach the coral reef fringes the N and E sides of Lanai to a width of as much as 0.3 mile. In general, the beach is backed by a low, narrow strip of land that rises gently to the tableland. Vegetation consists of cactus, low brush, and a few small trees.

**Puu Papai** is 2 miles NW of Kamalo Harbor and 0.6 mile inland. Deep **Kamalo Gulch** is 1 mile E of the hill and 2.5 miles W of the hill is **Kawela Gulch**, which extends well inland from the small village of **Kawela**. From Kamalo Harbor the coast has a W trend and the reef extends as much as 1 mile from shore.

**Haleolono Point**, 13 miles W of Kaunakakai and 3.5 miles E of Laau Point, is a conspicuous brown bluff, 50 feet high, that extends 0.2 mile along the water's edge.

Laau Point, the SW extremity of Moloka'i, is low and rocky; the 10-fathom curve is about 0.5 mile offshore. Laau Point Light (21°05'59"N., 157°18'18"W.), 151 feet above the water, is shown from an 18-foot pole with a black and white diamond-shaped dayboard on a bluff near the point. The prevailing current off Laau Point is N, and vessels are cautioned against a set onto the point.

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Honolulu Commander

14th CG District Honolulu, HI

(808) 535-3333

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# MOORING BUOYS

Numerous privately maintained mooring buoys are located in the harbor.

Mercator Projection Scale 1:80,000 at Lat 21°01'

World Geodetic System 1984 (North American Datum of 1983)

SOUNDINGS IN FATHOMS AT MEAN LOWER LOW WATER

#### WARNING

The prudent mariner will not rely solely or any single aid to navigation, particularly or loating aids. See U.S. Coast Guard Light Lis and U.S. Coast Pilot for details.



#### AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to

## CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

For Symbols and Abbreviations see Chart No. 1

## RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual rada reflector identification on these aids has been omitted from this chart.

## CAUTION

# SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:

Additional uncharted submarine pipelines and submarine cables may exist within the area o this chart. Not all submarine pipelines and sub-marine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling. Covered wells may be marked by lighted or

unlighted buoys

# NOAA WEATHER RADIO BROADCASTS

The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Mt Kaala, HI KBA-99 162.550 MHz Hawaii Kai, HI KBA-99 162,400 MHz Mt Haleakala, HI KBA-99 162.400 MHz

# POLLUTION REPORTS

Report all spills of oil and hazardous sub-stances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

# CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117. Radio direction-finder bearings to commercial

broadcasting stations are subject to error and should be used with caution.
Station positions are shown thus:

(Accurate location) o(Approximate location)

# **Table of Selected Chart Notes**

Fish Aggregating Devices (FADs), are established along the coastal waters of the main Hawai ian Islands

Navigation regulations are published in Chapter 2, U.S Coast Pilot 7. Additions or revisions to Chapter 2 are pub Coast Guard District in Honolulu, Hawaii or at the Office of the District Engineer, Corps of Engineers in

Refer to charted regulation section numbers

#### HORIZONTAL DATUM

The horizontal reference datum of this chart is World Geodetic System 1984 (WGS 84), which for charting purposes is considered equivalent to the North American Datum of 1983 (NAD 83). Geographic positions referred to the Old Hawaiian Datum must be corrected an average of 11.428' southward and 10.022' eastward to agree with this chart.

#### AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the U.S. Coast Guard, Geological Survey, and National Geospatial-Intelligence Agency.

#### HEIGHTS

Elevations of rocks, bridges, landmarks and lights are in feet and refer to Mean High Water. Contour and summit elevation values are in feet and refer to Mean Sea Level.

#### NOTE X

Mithin the 12-nautical mile Territorial Sea, established by. Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Ricc, and the Three Nautical Mile Line elsewhere remain in most cases the inner the state of the coast of Florida. limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Courr, these maritime limits are subject to modification.

#### SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

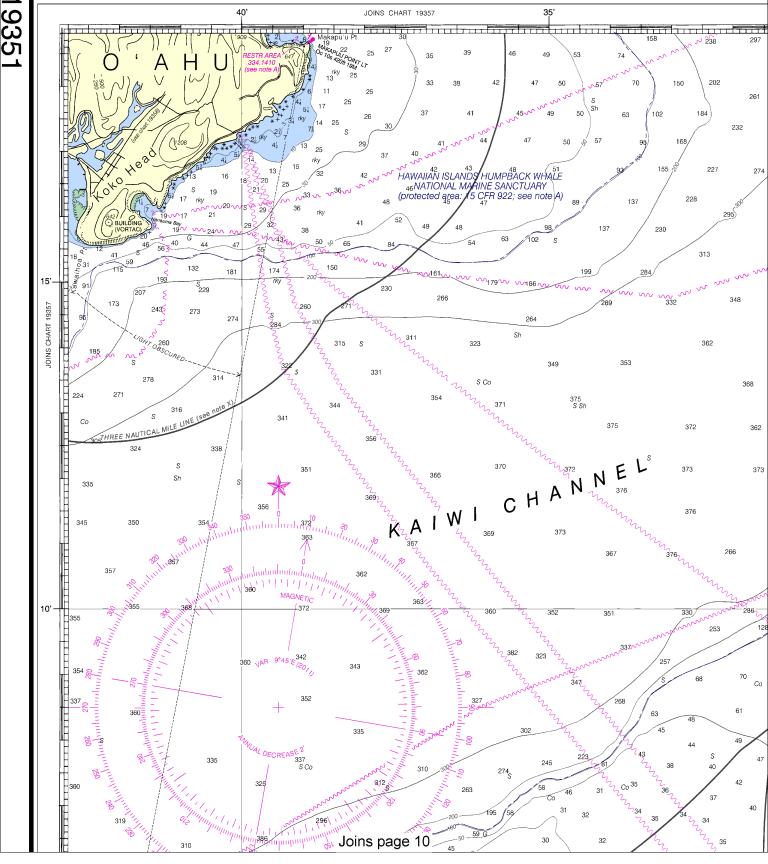
# COLREGS, 80.1410 (see note A)

ternational Regulations for Preventing Collisions at Sea, 1972. he entire area of this chart falls seaward of the COLREGS Demarcation Line.

PLACE		Height referred to datum of soundings (MLLW		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Hanauma Bay, O'ahu	(21°17'N/157°42'W)	1.9	1.5	0.2
Kaunakkakai Harbor, Moloka'i	(21°05'N/157°02'W)	2.1	1.6	0.2
Kaumalapau, Lāna'i	(20°47'N/157°00'W)	2.2	1.7	0.2

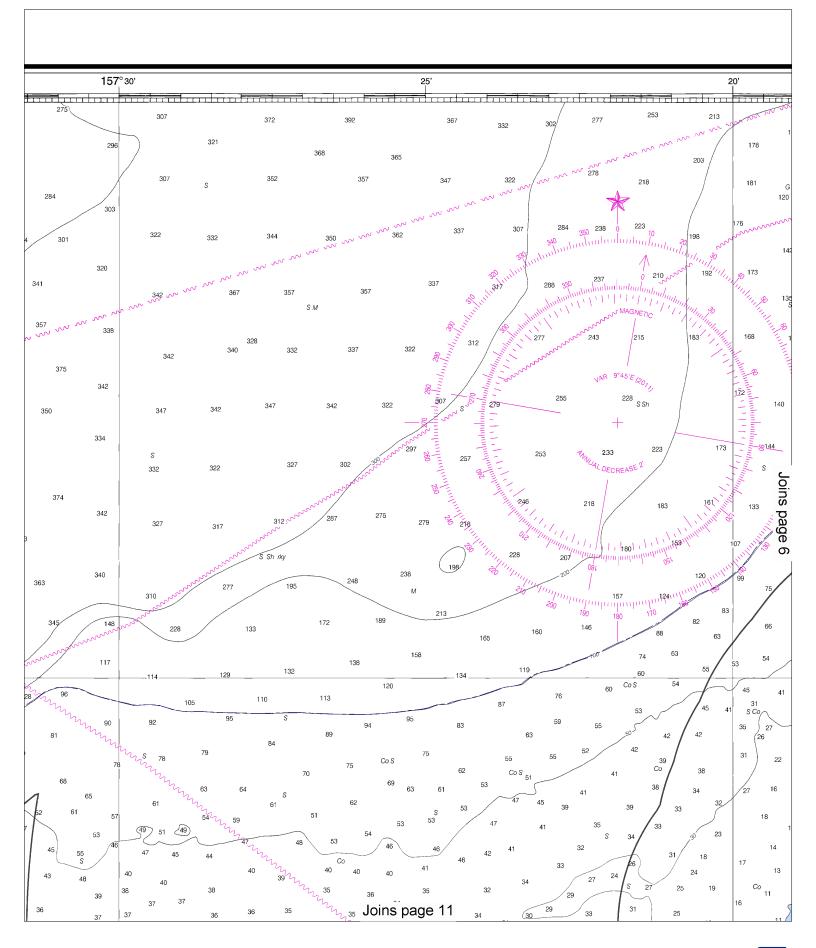
---} located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the Internet from http://tidesandcurrents.noaa.gov. (Jul 2011)

This nautical chart has been designed to promote safe navigation. The National Ocean Service encourages users to submit corrections, additions, or comments for improving this chart to the Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282.

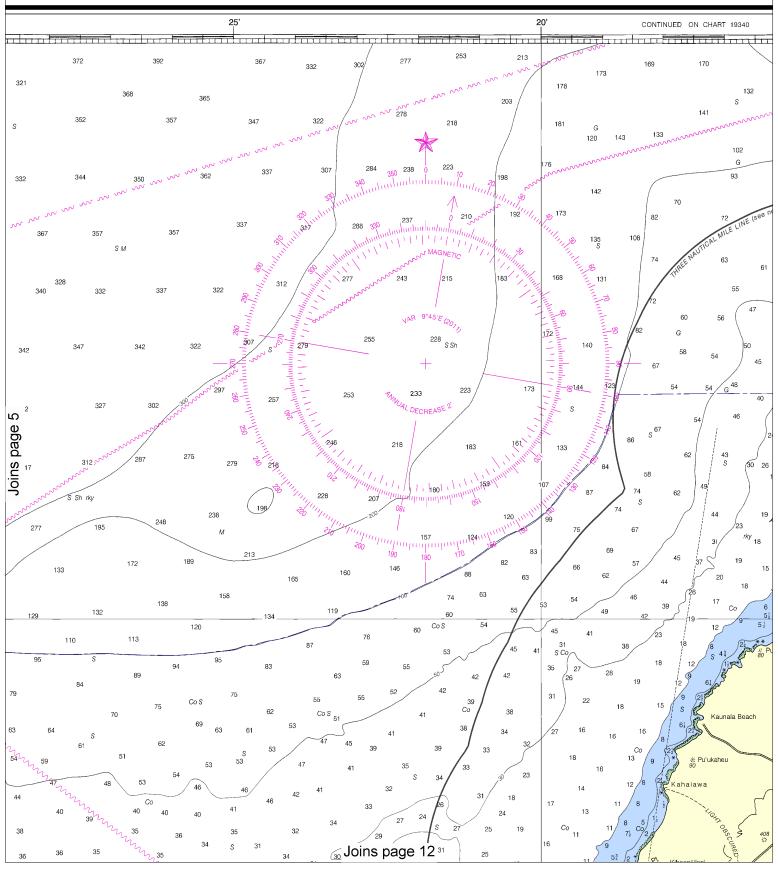


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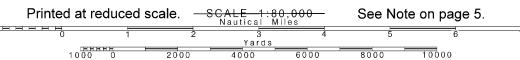


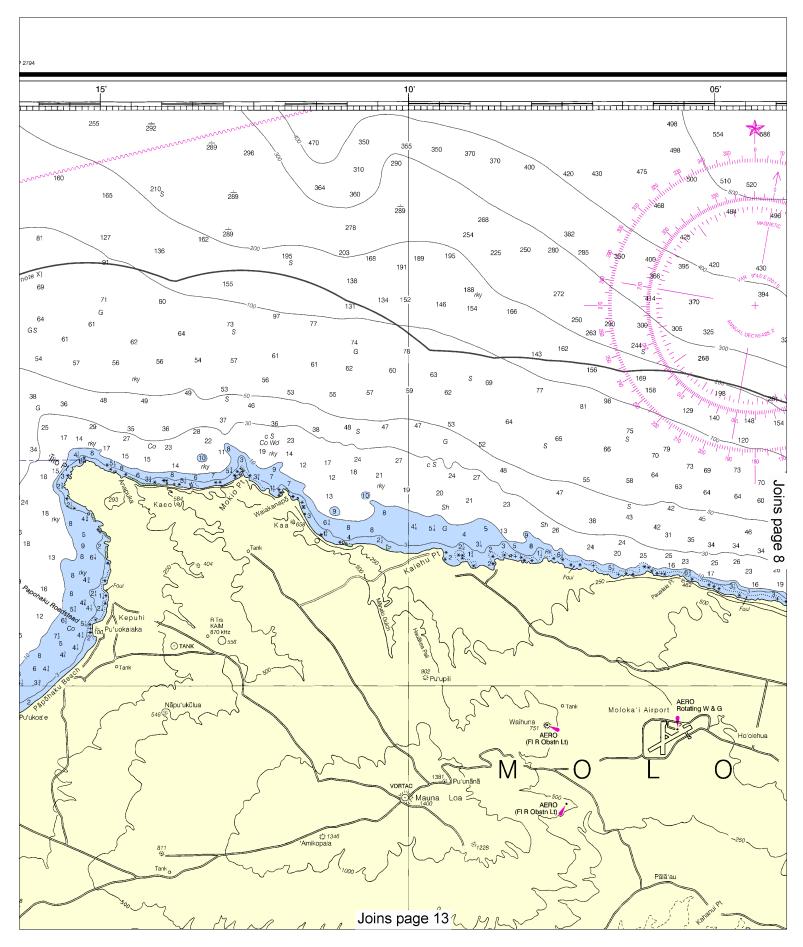


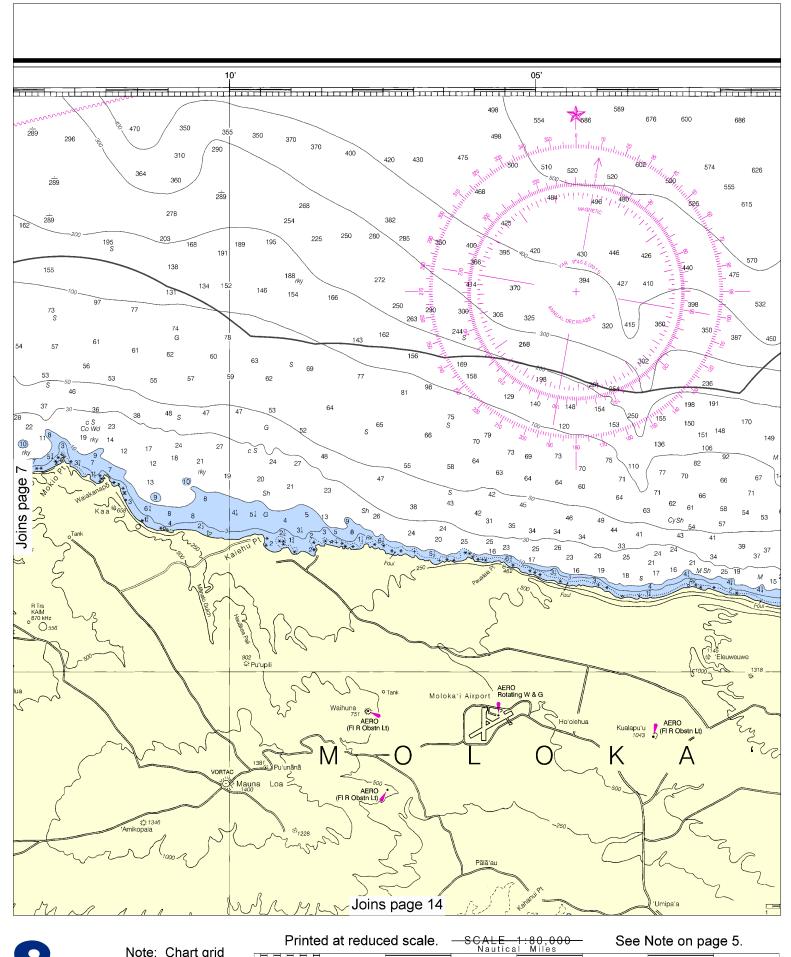
This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:106667. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.



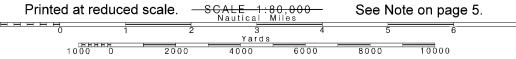




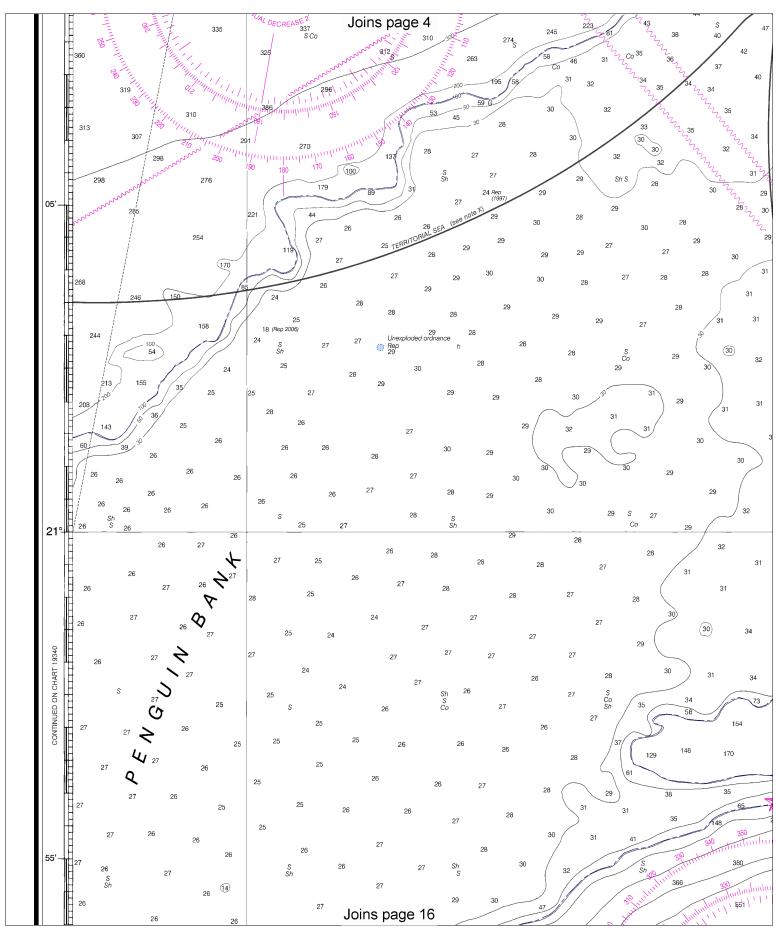


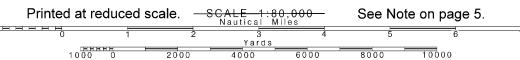


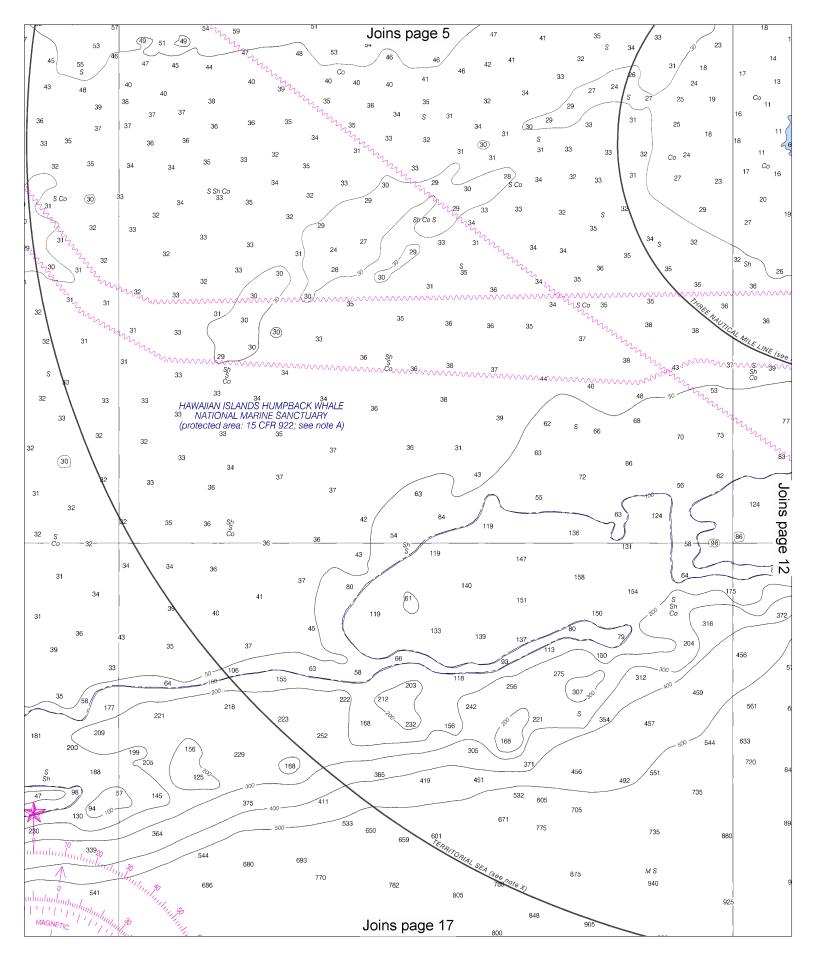


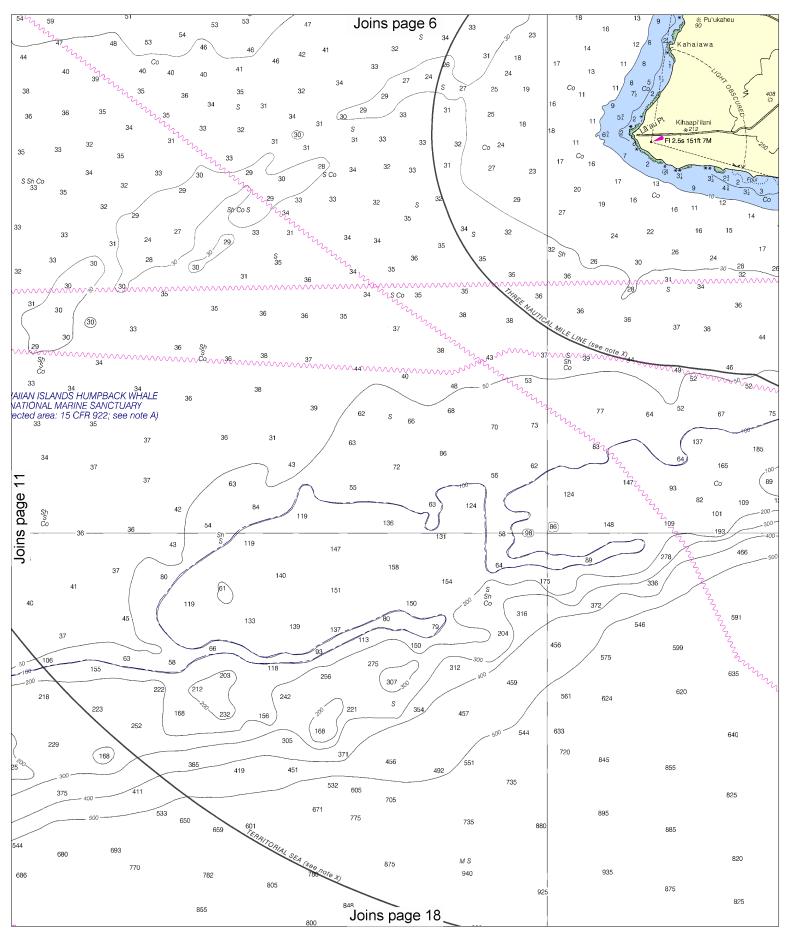


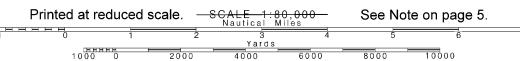
# **SOUNDINGS IN FATHOMS** 157° MS (500) <sup>420</sup> S M vol S Sh 405 16 SA 15 Kahi'u Pt 143 149 4535 % Kaunuohua Joins page 15=

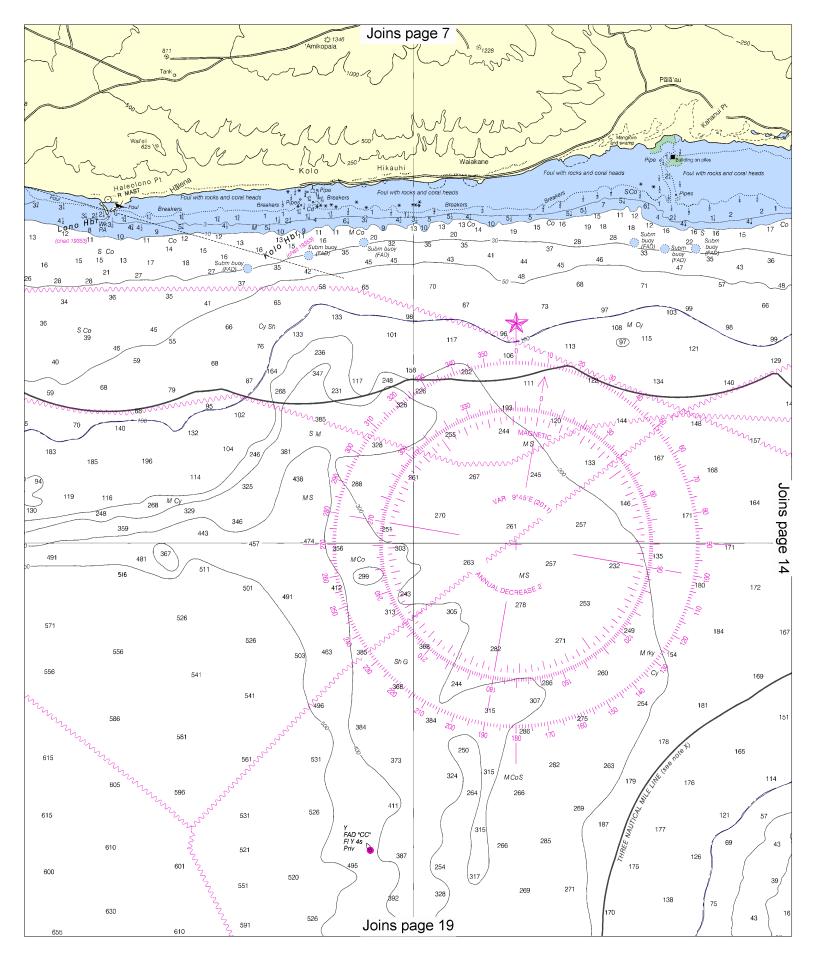


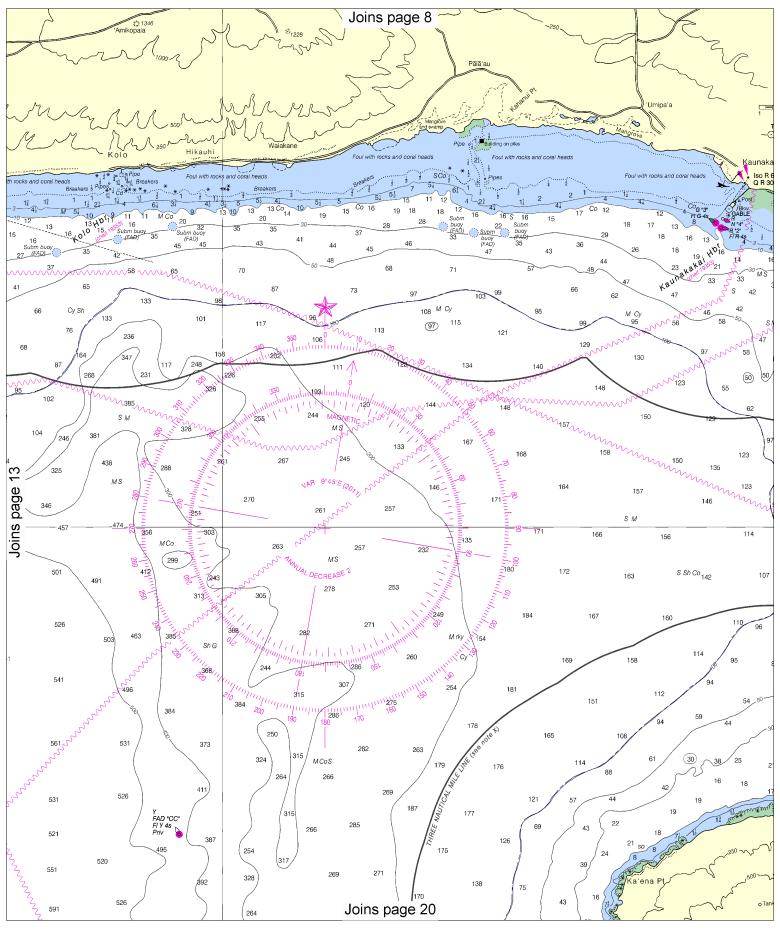


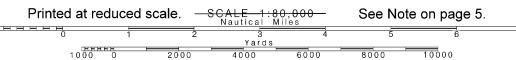


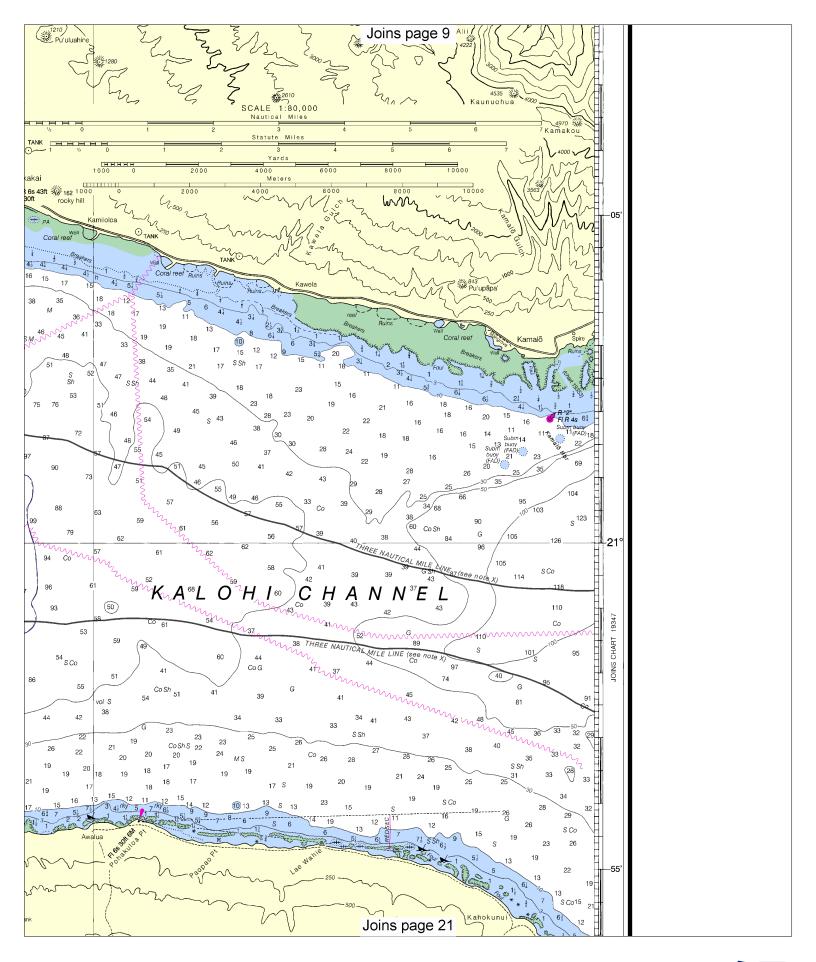


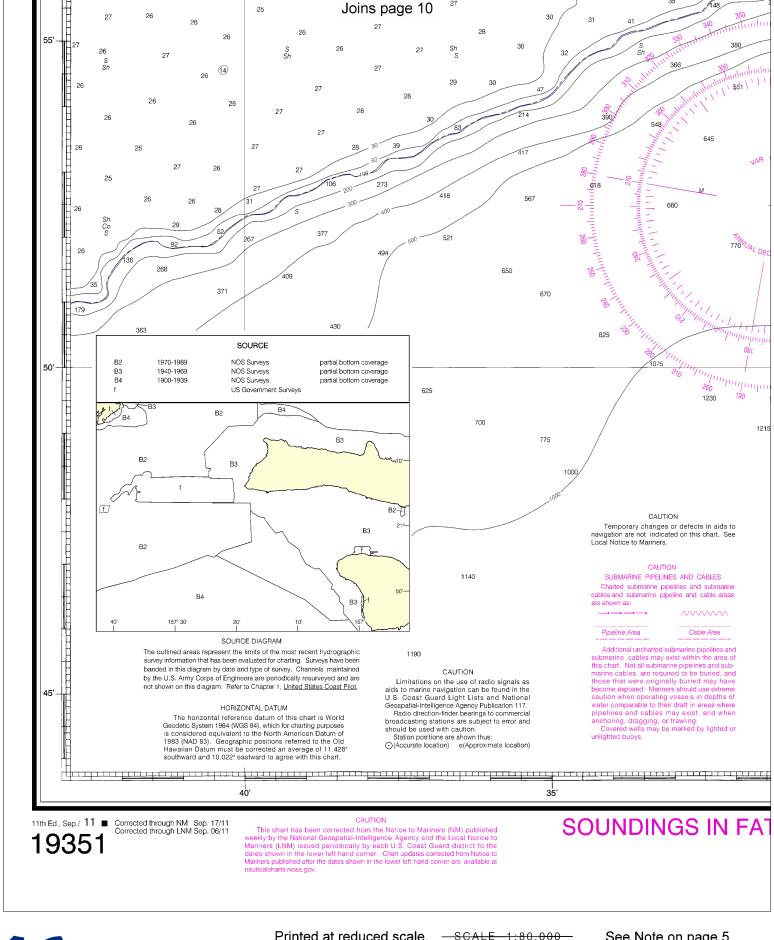




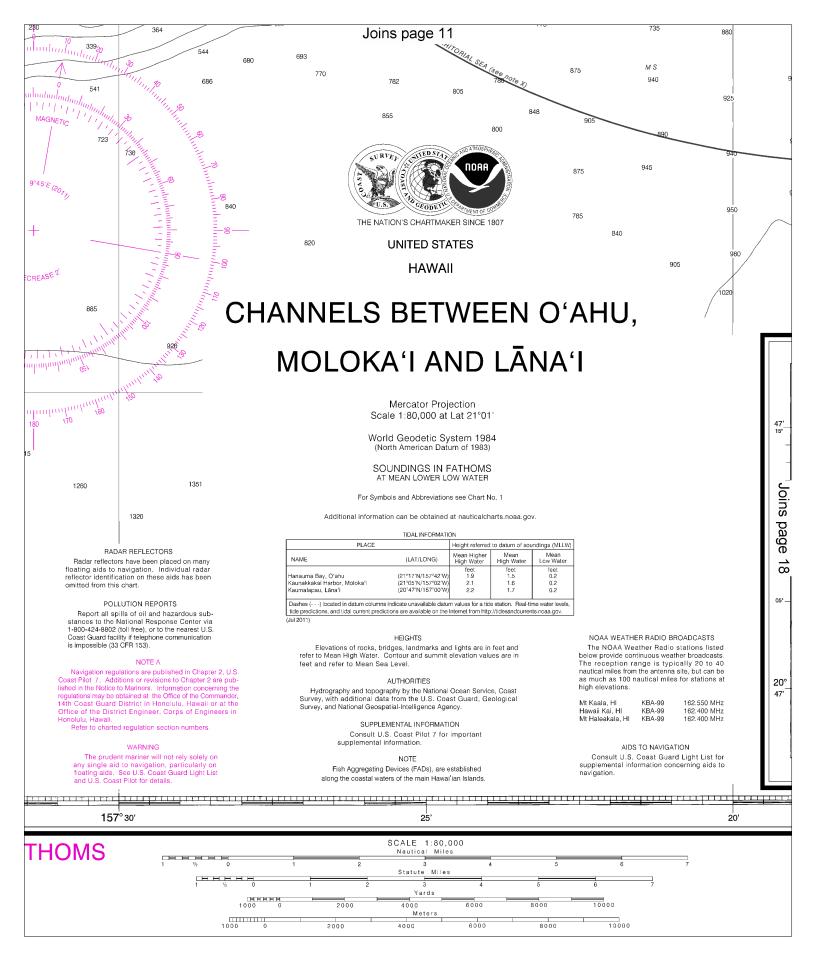


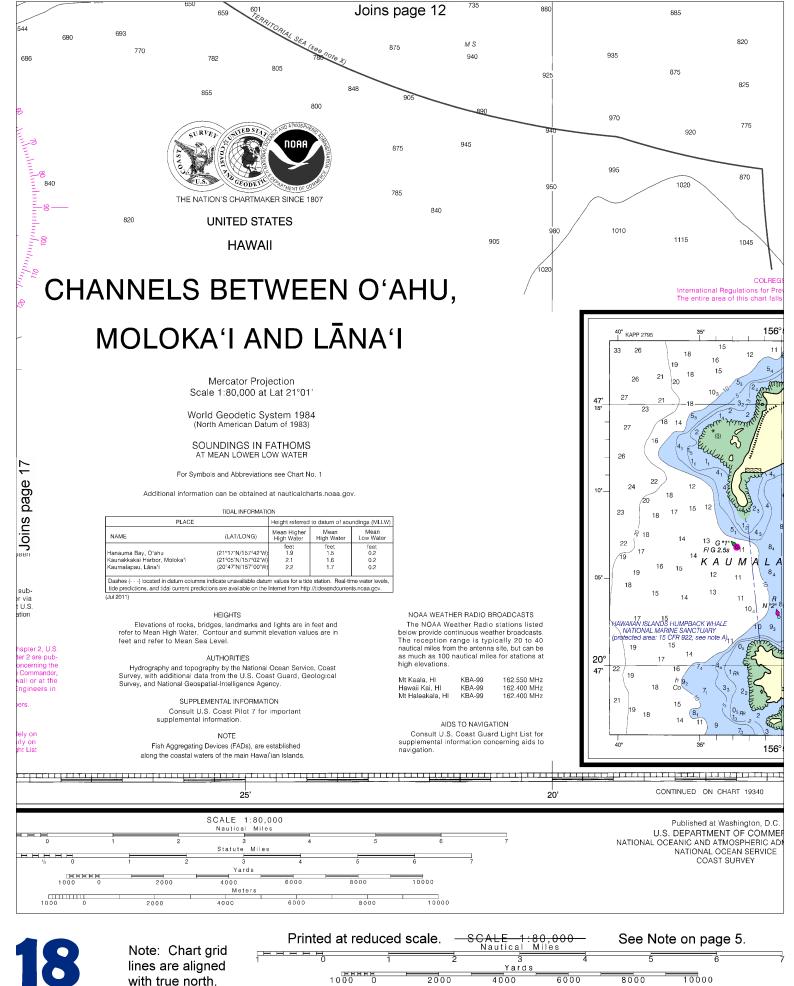


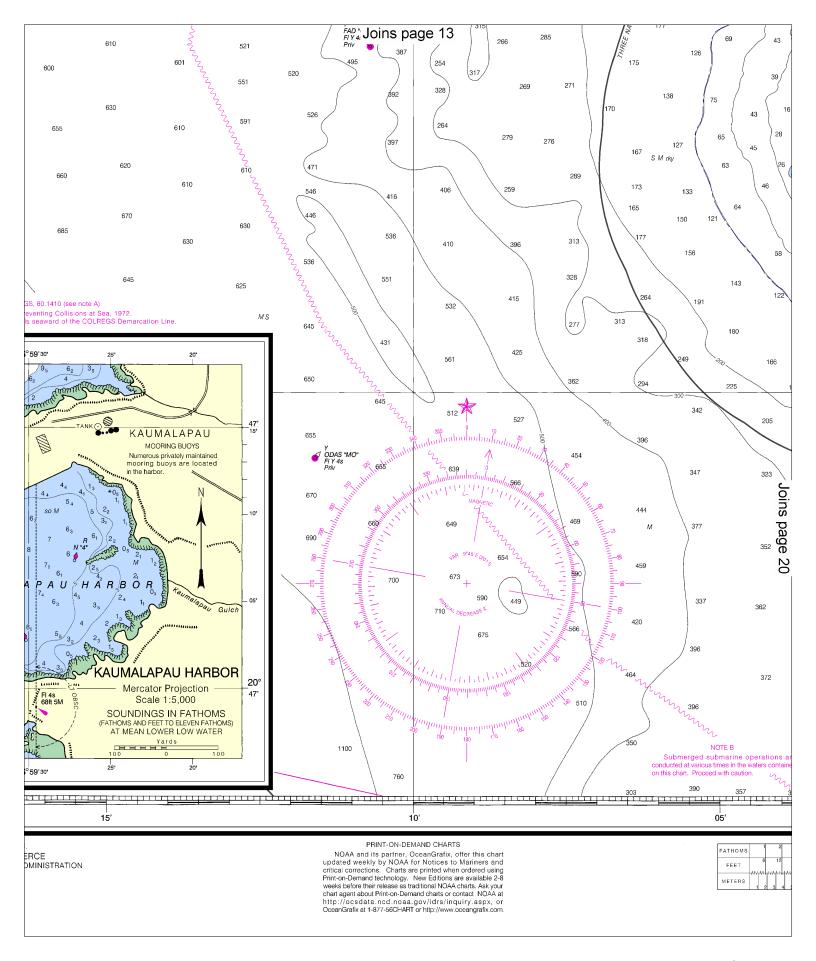


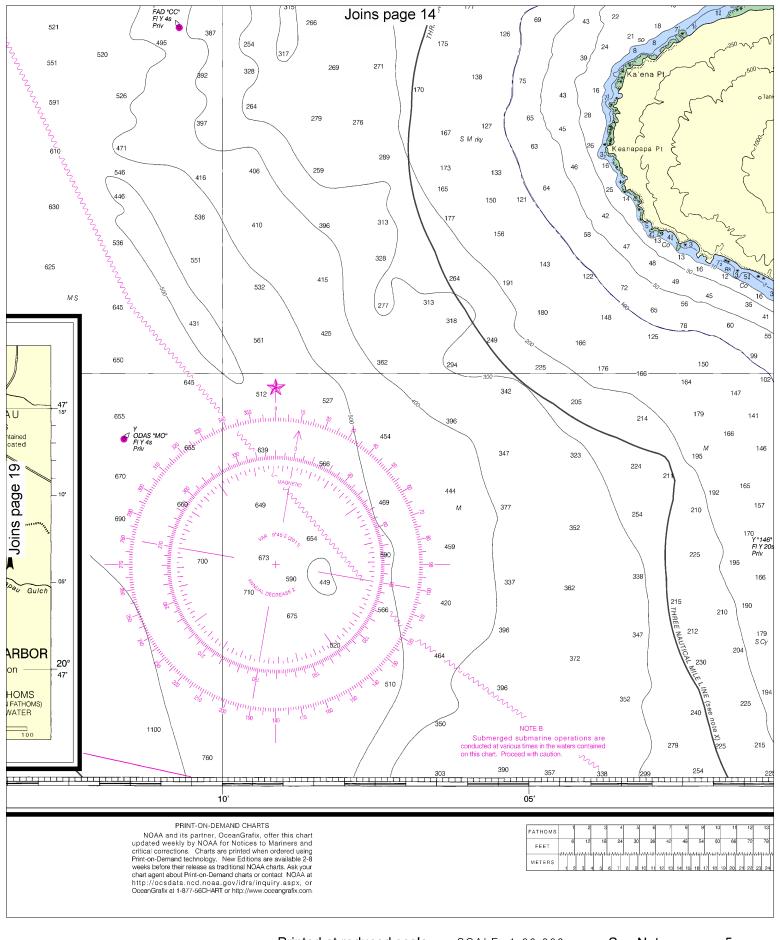


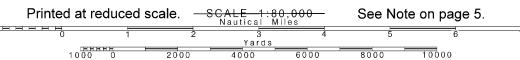


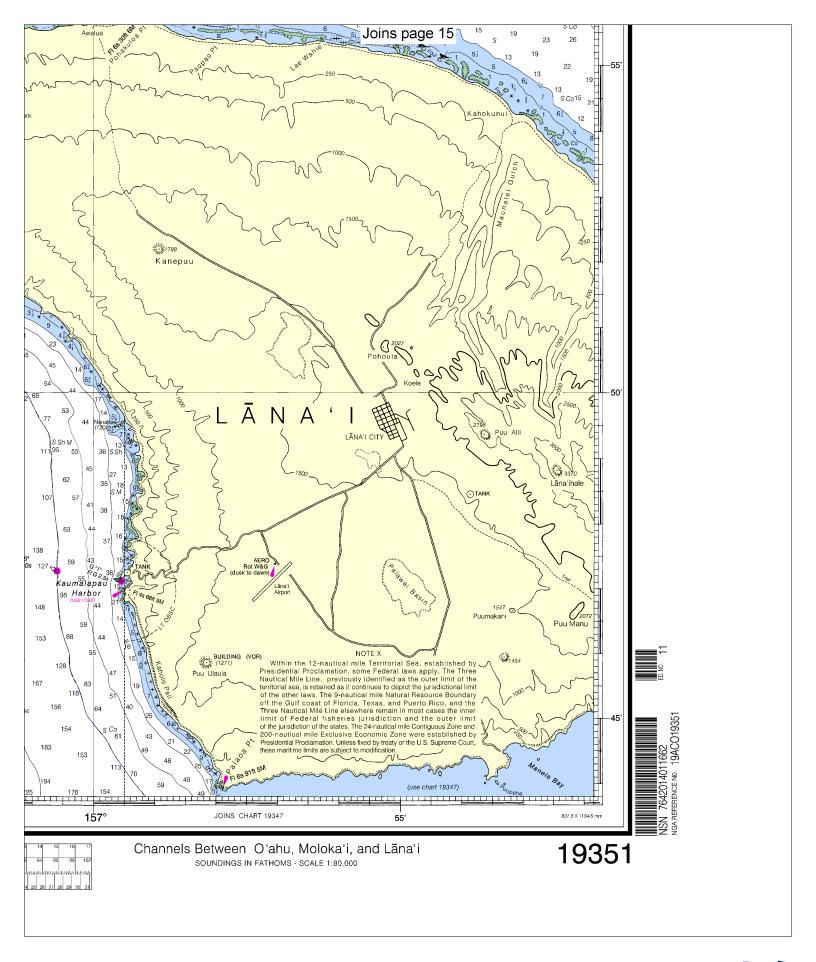














# VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here. Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

**Getting and Giving Help** — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

# **Distress Call Procedures**

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of

Emergency; Number of People on Board.

- · Release transmit button.
- Wait for 10 seconds If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

http://www.nws.noaa.gov/nwr/

# **Quick References**

Nautical chart related products and information — http://www.nauticalcharts.noaa.gov

Online chart viewer — <a href="http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html">http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html</a>

Report a chart discrepancy — http://ocsdata.ncd.noaa.gov/idrs/discrepancy.aspx

Chart and chart related inquiries and comments — http://ocsdata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs

Chart updates (LNM and NM corrections) — http://www.nauticalcharts.noaa.gov/mcd/updates/LNM\_NM.html

Coast Pilot online — http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm

Tides and Currents — http://tidesandcurrents.noaa.gov

Marine Forecasts — http://www.nws.noaa.gov/om/marine/home.htm

National Data Buoy Center — http://www.ndbc.noaa.gov/

NowCoast web portal for coastal conditions — http://www.nowcoast.noaa.gov/

National Weather Service — http://www.weather.gov/

National Hurrican Center — http://www.nhc.noaa.gov/

Pacific Tsunami Warning Center — http://ptwc.weather.gov/

Contact Us — http://www.nauticalcharts.noaa.gov/staff/contact.htm



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This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

